

reasonably and practicably obtain from an alternative source (including through self-provision). The fact that a number of competitors are offering a particular service on a competitive basis without access to the incumbent's facilities conclusively establishes that a reasonably efficient competitor does not need access to such facilities to have a meaningful opportunity to compete.<sup>297</sup> In such a case, the Commission could not reasonably conclude that the necessary and impair standard is met, and therefore could not require unbundling.

There is ample evidence that the market for OS/DA services is national in scope, and robustly competitive. Although end-users may purchase OS/DA services locally (for example, as part of their local telephone service, or through their local exchange carrier), the services themselves generally are provided on a national or regional basis through one or more large call centers.<sup>298</sup> In addition, the terms and conditions on which these services are provided are largely uniform. Because the relevant market is therefore national in scope, a single national rule applicable for OS/DA functionality would be appropriate. Moreover, the evidence clearly establishes that the national rule should be that unbundling of OS/DA facilities and functionality should not be required.

#### **1. There Are Ample Alternative Sources of OS/DA Functionality.**

There are ample sources of OS/DA facilities and functionality outside the ILECs' networks. Numerous companies are offering competitive OS and DA throughout the country.<sup>299</sup> The largest CLECs, AT&T and MCI, offer national directory assistance services, which are

---

<sup>297</sup> The fact that other service providers might not be required to make their facilities available at cost is irrelevant. The fact that providers are offering a service using their own facilities establishes that any reasonably efficient new entrant could develop a viable business case for offering service over its own facilities. Aron and Harris at 44.

<sup>298</sup> *UNE Fact Report* at IV-9.

<sup>299</sup> *UNE Fact Report* at IV-2, Table 1.

accessible from any telephone in the country.<sup>300</sup> Those carriers, together with Sprint, also provide operator services (including calling card, collect, bill-to-third number, and person-to-person calling) nationwide via toll-free numbers.<sup>301</sup>

Many smaller CLECs also provide their own OS/DA services or resell the services of other OS/DA providers. McLeod USA, for example, provides its own nationwide directory assistance.<sup>302</sup> Many other CLECs resell the services of a large number of wholesale providers of OS/DA services. GST Telecom and ALLTEL Communications, for example, provide OS/DA obtained from Metro One; Cox and Omnipoint provides OS/DA obtained from TelTrust; and Winstar and Omnipoint provide such services obtained from Frontier.<sup>303</sup>

The largest wholesale providers of OS/DA are Excell, Teltrust, InfoNXX, Metro One, and HebCom.<sup>304</sup> These companies operate one or more call centers, and offer branded service to other carriers, including many CLECs.<sup>305</sup> These companies also permit CLECs to purchase such services in the volumes they need, minimizing their costs.<sup>306</sup>

The Internet too provides substantial competition to traditional ILEC OS/DA services. Numerous Internet sites offer DA services, many at no charge.<sup>307</sup> The largest such site is

---

<sup>300</sup> *Id.* at IV-1 (citing J. Knapp, *National Directory Assistance Battle Heats Up*, Phone+ Magazine, Dec. 1998).

<sup>301</sup> *UNE Fact Report* at IV-2.

<sup>302</sup> *Id.* at IV-2. Numerous wireless carriers also provide competitive DA services. *Id.*

<sup>303</sup> *Id.* at IV-2, Table 1.

<sup>304</sup> *Id.* at IV-4.

<sup>305</sup> *Id.*

<sup>306</sup> *Id.* at IV-5. According to an industry study, wholesalers "will quote prices for data listings or records. Quotes are usually based on a cost per 1000 records, and prices are fully negotiable." *Id.* (quoting The Insight Research Corporation, *Enhanced Directory and Operator Services 1998-2003* at 41 (July 1998)).

<sup>307</sup> *Id.* at IV-2.

Switchboard.com, which last year was ranked as the tenth most popular web site according to one study.<sup>308</sup> Several Internet sites also provide call completion functions that compete with ILEC operator services, in addition to simple directory assistance.<sup>309</sup>

As a result of the foregoing competition, ILECs have lost significant volumes of OS/DA traffic. In Ameritech's region, for example, operator service call volumes have declined 21 percent, and calls for directory assistance have dropped by 35 percent, since 1995, even as the number of access lines grew substantially. In addition, several interconnecting CLECs (including, *inter alia*, AT&T, TCG, Level 3 Communications, and McLeod) provide facilities-based local exchange service over their own, or unbundled, local loops, but do not use Ameritech's operator services or directory assistance. Others, including Consolidated Communications, WorldCom, and Time Warner, purchase directory assistance, but not operator services. Thus, it is clear that CLECs have available, and are actually using, many alternative sources of OS/DA.

## **2. CLECs Could Easily Self-Provide OS/DA Services.**

In addition to all of the alternative sources of OS/DA available, CLECs could easily self-provide OS/DA because the resources necessary to provide such services (including databases, real estate, labor, and computers) are readily available.

### **A. OS/DA Databases.**

---

<sup>308</sup> *Id.* (citing Switchboard.com Press Release, *Switchboard Audience Figures Skyrocket*, Feb. 25, 1998. Other major DA web sites include InfoSpace, InfoNow, Zip2.com, and [www.anywho.com](http://www.anywho.com), a site operated by AT&T, which contains extensive residential and business listings. *Id.* at IV-2, IV-3(citations omitted).

<sup>309</sup> *Id.* at IV-4. AT&T's Anywho site, for example, enables users to complete calls to requested listings with software provided for free at the site. *Id.* (citation omitted). In March 1999, Qwest and Switchboard.com announced plans to offer customers the ability to place calls automatically from the Internet. *Id.* (citation omitted).

Some of the key resources necessary to provide OS/DA are the databases containing subscriber list and customer billing information.<sup>310</sup> Section 251(b)(3) of the Act requires all LECs to provide competitors “nondiscriminatory access to . . . operator services, directory assistance, and directory listings.”<sup>311</sup> In the *Second Local Competition Order*, the Commission adopted Rule 217, which requires all LECs to “permit competing carriers to have access to and read the information in the LECs directory assistance databases,”<sup>312</sup> guaranteeing CLECs non-discriminatory access to the OS/DA databases of all LECs. With assured access to subscriber list information from other LECs, CLECs can easily create their own directory assistance databases, and establish their own OS/DA call centers using their own operators, computers and equipment.<sup>313</sup>

CLECs also could create their own databases using information obtained from one of the many competitive suppliers of OS/DA databases and services, and directory listings. The largest of these suppliers are Experian, VoltaDelta, InfoUSA, Dun & Bradstreet, R.R. Donnelly, Axicom Corporation and The Berry Company.<sup>314</sup> These companies supply name, number, and address information on a local and national basis, and typically update this information on a daily

---

<sup>310</sup> Directory assistance databases contain customer names, numbers and addresses; operator services databases contain customer billing information, including information concerning which customers will accept collect calls or third party billing. *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Second Report and Order and Memorandum Opinion and Order, 11 FCC Rcd 19392, 19446 n.252 (1996) (*Second Local Competition Order*).

<sup>311</sup> 47 U.S.C. § 251(b)(3).

<sup>312</sup> 47 C.F.R. § 51.217(c)(ii).

<sup>313</sup> Even if CLECs do not establish their own call centers, Rule 217 requires all LECs to provide competitors access to OS/DA services in their entirety on a branded or unbranded basis. 47 C.F.R. § 51.217(c)(iv) and (d). Consequently, the only conceivable reason for unbundling OS/DA functionality is to enable CLECs to obtain what Rule 217 already grants them, but at a lower price. As discussed above, however, that is not a permissible basis for requiring unbundling. As the Supreme Court made clear, a carrier is not impaired in its ability to provide services by denial of access to an element if a reasonably efficient competitor would still have a meaningful opportunity to compete without such access. *See AT&T*, 119 S. Ct. at 735 n.11.

basis to ensure database accuracy.<sup>315</sup> Many of these companies provide subscriber list information on a per listing basis, or supply entire databases on magnetic tapes or CDs,<sup>316</sup> permitting carriers to offer OS/DA services at different scales.

Many companies have utilized directory listing information from these sources to offer their own OS/DA services. AT&T, for example, has for several years obtained directory listings from such sources.<sup>317</sup> Similarly, Ameritech has obtained directory listings from across the country from other RBOCs and third party providers to compile its national directory assistance database. Other carriers could quickly and easily do the same.

Competitive LECs are themselves an increasingly important source of directory listings. CLECs already control well over 1.5 million White Pages directory listings nationwide, and are adding business customers at faster rate than ILECs.<sup>318</sup> As a consequence, ILECs have an incentive to share databases with CLECs to obtain reciprocal access to their directory listings.

#### **B. Other Facilities Used to Provide OS/DA.**

The other necessary ingredients to provide OS/DA services are real estate (to establish call centers), labor (operators) and computers. ILECs have no particular advantage in obtaining any of these inputs, which, in any event, do not require substantial investment to offer service. As Teltrust, which provides national directory assistance and call completion, stated, there is an

---

<sup>314</sup> *UNE Fact Report* at IV-8 (citing *Insight* at 3).

<sup>315</sup> *Id.* (citations omitted).

<sup>316</sup> *Id.* at IV-9 (citing *Insight* at 41).

<sup>317</sup> *Id.* at IV-8 (citing L. Gornstein, *New Competition, Services Coming to Telephone Directory Assistance*, *The Orange County Register*, Feb. 16, 1998).

<sup>318</sup> *Id.* at IV- 9 (citations omitted).

“absence of substantial barriers to entry in the call completion, national directory assistance, third-party verification and calling card services market.”<sup>319</sup>

Providing OS/DA services does not require a substantial investment in real estate because OS/DA can be provided on a regional or even national basis through one, or a handful, of call centers. McLeod USA, for example, operates a single national call center.<sup>320</sup> Teltrust and InfoNXX each operate four centers, HebCom operates five, and Excell operates six, each serving the entire country.<sup>321</sup>

OS/DA providers also must staff call centers with operators. ILECs exercise no control over this labor market. Any competitor can quickly hire and train their own operators.<sup>322</sup>

Finally, OS/DA providers require computer equipment and software for operator platforms, database applications and search engines. The market for such equipment is highly competitive. Nortel, Volt Delta and PC Plus each make all three components; IBM provides operator platforms and search engines; Metromail makes database applications;<sup>323</sup> and Alcatel and Lucent also make one or more of these components.<sup>324</sup>

There are therefore numerous available alternative sources not only of OS/DA services, but also of OS/DA facilities and functionalities. Many CLECs are already using these alternative

---

<sup>319</sup> *Id.* (citing Teltrust, Inc., SEC Form S-1 A, July 8, 1998).

<sup>320</sup> *Id.* at IV-9 (citing *Insight* at 70).

<sup>321</sup> *Id.* at IV-8, IV-9 (citations omitted).

<sup>322</sup> Just over two months ago, Excell announced that it would hire 2,000 new operators to meet demand associated with being named outsourcing agent for AT&T's new national directory service, AT&T-00-Info. *Id.* at IV-10 (citing Excell Agent Services, Press Release, *Excell Agent Services Announces Aggressive Hiring Campaign*, Mar. 12, 1999).

<sup>323</sup> *Id.* at IV-10 (citing *Insight* at 76).

<sup>324</sup> *Id.* (citing *Insight* at 76; Alcatel Website, <http://www.alcatel.com/telecom/nid/netsol/operator/voiceser/infoserv.htm#dir>).

services, facilities and functionalities to offer competitive OS/DA services. In addition, all of the inputs necessary to provide OS/DA services are readily available. Consequently, CLECs do not need to obtain access to ILEC OS/DA facilities to have a meaningful opportunity to compete. As such, the Commission cannot, consistent with the Court's opinion, require ILECs to provide unbundled access to such facilities and functionalities.

**e. Signaling Networks and Call-Related Databases.**

Each carrier's switch is connected to its signaling network.<sup>325</sup> While signaling networks are interconnected to permit carriers to interoperate, current technology requires each local switch to be connected to one, and only one, signaling network.<sup>326</sup> Consequently, if a CLEC were to purchase unbundled local switching from an ILEC, it would necessarily have to connect to the ILEC's signaling network as well.<sup>327</sup> Otherwise, it could not successfully route its calls. Thus, to the extent the Commission requires an ILEC to unbundle local switching in a particular market, the ILEC would also have to provide access to its signaling network.

CLECs that deploy their own switches, however, have no need to access the ILEC's signaling network. Any reasonably efficient CLEC could reasonably and practicably deploy its own signaling network, or obtain signaling from a third party provider of signaling services.<sup>328</sup>

---

<sup>325</sup> *UNE Fact Report* at V-1.

<sup>326</sup> *UNE Fact Report* at V-1; see also James H. Green, *The Irwin Handbook of Telecommunications* 297 (3<sup>rd</sup> Ed. 1997) (explaining SS7 architecture). The SS7 network routes messages on a point-to-point basis using unique originating and terminating point codes. Each node in the network is identified by its own unique point code/network address. When a call is set-up between two end office switches, the originating end office formulates an initial address message (IAM) to the terminating end office. The IAM includes the originating telephone number, originating point code, terminating telephone number, and terminating point code. To route a signaling packet successfully, the switching transfer point must associate each point code with a particular end office. Existing technology therefore permits routing over only a single set of A-links (links between a specific end office and the SS7 network) for any given point code.

<sup>327</sup> *UNE Fact Report* at V-1.

<sup>328</sup> *Id.*

There are no significant barriers to the deployment of signaling networks and databases. CLECs can use a single pair of STPs or SCPs to serve many switches nationwide.<sup>329</sup> The equipment used to provide signaling is readily available from a broad array of highly competitive equipment manufacturers, including Lucent, Ericsson, Nortel, Alcatel, Tekelec, and others. Tekelec, in particular, has designed a STP – the Eagle – specifically to cater to the needs of CLECs. According to Tekelec, the Eagle is “smaller, less costly, and arguably . . . more flexible,” than other STPs.<sup>330</sup>

That CLECs can reasonably and practicably deploy their own signaling networks is plainly shown by the fact that numerous CLECs have already done so. Not only are the largest CLECs operating their own SS7 networks,<sup>331</sup> but several smaller CLECs are as well. These include, *inter alia*, GST Telecommunications, Intermedia, ICG and Universalcom.<sup>332</sup> In addition, US LEC and CenturyTel recently purchased STPs from Tekelec.<sup>333</sup> Thus, any reasonably efficient CLEC could self-provide signaling.

CLECs could also obtain signaling from one of several competitive wholesalers of signaling services, such as Illuminet, Transaction Network Services, GTE Internetworking Services, and SNET. Illuminet, for example, provides CLECs signaling and enhanced applications, including local number portability, SS7 network usage measurement and billing

---

<sup>329</sup> *UNE Fact Report* at V-1. Long-haul transport of signaling to distant STPs is the industry norm. *Id.*

<sup>330</sup> *UNE Fact Report* at V-5.

<sup>331</sup> AT&T and MCI are both utilizing their own SS7 networks to provide competitive local exchange service. *Id.*

<sup>332</sup> *Id.* at V-2, and V-3, Table 1

<sup>333</sup> *Id.* at V-5 (citing Tekelec Press Release, *US LEC Purchases STP from Tekelec*, Apr. 26, 1999; Tekelec Press Release, *CenturyTel Selects Eagle STP*, Feb. 22, 1999).



services, as well as access to Line Information Databases (LIDBs) throughout the United States.<sup>334</sup> CLECs purchasing signalling from Illuminet can, through one connection, connect to “all RBOC LATAs, GTE, Sprint LTD and other carriers,” without having to “negotiate separate connectivity arrangements.”<sup>335</sup>

TNS likewise operates a national SS7 network that enables carriers to complete calls and retrieve information for billing and back office support.<sup>336</sup> Like Illuminet, TNS interconnects with the SS7 networks of the many local carriers (including the BOCs, SNET, GTE, and others), offers CLECs a single gateway to all available LEC data centers, and provides access to LIDBs, customized database products, and local number portability.<sup>337</sup> Thus, even if a CLEC chooses not to deploy its own signaling network, it can quickly and easily obtain signaling from one of several competitive providers of signaling services.

CLECs that provide their own switches also do not need obtain access to ILEC LIDBs and other call-related databases (such as the 800 Data Base – 800 DB) at TELRIC rates. As discussed above, switch-based CLECs can obtain call validation or other services from call-related databases across the United States through one of the many wholesale providers of signaling. Illuminet, for example, advertises that, by purchasing service from Illuminet, CLECs can “[a]ccess LIDBs throughout the United States to validate alternately-billed calls and minimize fraud before it impacts [their] customers.”<sup>338</sup> It further claims that it will work closely

---

<sup>334</sup> *Id.* at V-3 (citations omitted).

<sup>335</sup> *Id.* at V-3 (citations omitted).

<sup>336</sup> *Id.* at V-4 (citing *SS7 Vendor Gears Up For Illinois Number Pooling Trial*, *Communications Today*, Jan. 12, 1999).

<sup>337</sup> *Id.* (citations omitted).

<sup>338</sup> <http://www.illuminet.com/local/lolidb.htm>.

with carriers "to ensure [their] LIDB Access and Transport service meets [their] objectives and helps [them] provide the best possible customer service, regardless of whether or not [they've] upgraded to SS7."<sup>339</sup> Illuminet also claims that carriers that purchase access to its 800 databases will have access to "the information [they] need during the call handling process."<sup>340</sup>

Likewise, Revenue Communications (Revcom) asserts that its recently constructed SS7 network, which connects to LIDBs across the country, "is state of the art, faster, more flexible, less expensive to operate, cost beneficial to our clients and more profitable than the ILECs."<sup>341</sup> And SNET claims that its "proven database technology, coupled with an adaptable variety of service options, can help you maximize your 800 market opportunities."<sup>342</sup> Moreover, a CLEC could access ILEC databases to obtain call validation or 800 DB at tariffed rates.<sup>343</sup>

CLECs also can store customer line validation information in LIDBs and other databases maintained by third party signaling providers. Revcom, for example, advertises that:

CLECs . . . now have a line information database storage facility created and customized for their own usage. Revcom . . . of Allen, Texas has completed a database server designed for use as a LIDB for LECs . . . who compete with the incumbent carrier. . . . With the advent of Revcom LIDB, a CLEC, ILEC, or RBOC can choose to store their information with a company that does not compete for local dial tone services.<sup>344</sup>

---

<sup>339</sup> *Id.*

<sup>340</sup> <http://www.illuminet.com/local/lo800db.htm>.

<sup>341</sup> Press Release, Revcom Marketing Dept., December 23, 1998.

<sup>342</sup> <http://www.snet.com/network/index.htm>.

<sup>343</sup> The fact that the tariffed rates for access to call-related databases may be higher than TELRIC is irrelevant. As discussed above, the Supreme Court specifically rejected the notion that any increase in cost could constitute impairment. To constitute impairment, an increase in price must deprive a reasonably efficient competitor of a meaningful opportunity to compete. The fact that many CLECs have obtained access to call-related databases from competitive suppliers of signaling conclusively proves that they do not need access to ILEC databases at TELRIC rates to compete.

<sup>344</sup> Press Release, Revcom Marketing Dept., December 23, 1998.

Similarly, Illuminet asserts:

We give telecommunications companies a secure place to store customer line information for call validation, while saving companies time, protecting them from fraud and helping them provide superior service to their customers. And, most importantly, we don't compete with you for your customers, because we do not provide telecommunications services directly to consumers. You can rely on us for maximum security and peace of mind.<sup>345</sup>

Thus, there are many alternative sources of signaling and call-related databases available. Switched-based CLECs can quickly and easily deploy their own signaling and call-related databases by purchasing necessary equipment from one of many manufacturers. Alternatively, they can purchase signaling and access to call-related databases from competitive signaling providers. Either way, they would have a meaningful opportunity to compete, as demonstrated by the many switched-based CLECs that are offering competitive service without purchasing access to ILEC signaling or call-related databases at TELRIC rates. Switch-based CLECs therefore would not be impaired if they were denied access to ILEC signaling and call-related databases as unbundled network elements.

**f. Advanced Telecommunications Capabilities.**

In the *Notice*, the Commission asks “whether network elements used in the provision of advanced services should be unbundled as discussed in the *Advanced Services NPRM*. ”<sup>346</sup> The answer is that they should not. Because advanced telecommunications capability (ATC)<sup>347</sup> is based on new technology – technology that is just now being deployed by ILECs and CLECs –

---

<sup>345</sup> <http://www.illuminet.com/local/loinedb.htm>.

<sup>346</sup> *Notice* at para. 35.

<sup>347</sup> Section 706(c)(1) of the 1996 Act defines “advanced telecommunications capability” as “high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.”

the facilities used to provide ATC, such as digital subscriber line multiplexers (DSLAMs) and packet switches, could not possibly meet any reasonable formulation of the necessary and impair test. To the contrary, these ATC facilities are quintessential examples of network elements that fall squarely within the clear limits of section 251(d)(2) throughout the country. That is true not only because ILECs have no legacy or other insuperable advantages with respect to new technology, but because a contrary view would tread all over one of the two fundamental purposes of the Act: promoting widespread investment in ATC. The Commission should thus rule that ILECs need not make available unbundled access to new equipment used for ATC, including DSLAMs, packet switches and other new technology.

Section 706(c)(1) of the 1996 Act defines “advanced telecommunications capability” as “high-speed, switched broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.” There are a number of technological options available for providing advanced services, most of which do not depend upon the ILEC’s network at all. These include cable modems, utility fiber to the home, satellite, and terrestrial radio. As the Commission has noted:

The fact [] that different companies are using different technologies to bring broadband to residential customers and that each existing broadband technology has advantages and disadvantages as a means of delivery to millions of customers opens the possibility of intermodal competition, like that between trucks, trains, and planes in transportation. By the standards of traditional residential telecommunications, there are, or likely will soon be, a large number of actual participants and potential entrants in this market.<sup>348</sup>

---

<sup>348</sup> *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, Report, CC Docket No. 98-146, released, Feb. 2, 1999 (*Advanced Services Report*), at para. 48 (footnotes omitted).

Not only do alternative technologies exist for the provision of broadband services, the providers of those alternative technologies are further along in their deployment of such services than are ILECs.<sup>349</sup> Indeed, the Commission has found that “[t]he preconditions for monopoly appear absent “ in the “last mile” of the advanced services market.<sup>350</sup>

*Significantly, none of these alternative providers of broadband services is subject to any unbundling obligations.* That, in itself, should give the Commission pause as it considers *adding* to the unbundling obligations of ILECs. The Commission has repeatedly stated that consumers, not regulators, should dictate the winners and losers in the marketplace. Increasing regulatory asymmetry is certainly not the path to that end.

Of course, irrespective of the regulatory status of alternative providers of broadband services, there is simply no justification for requiring unbundling of new technology used to provide such services over a copper loop. So long as CLECs have direct access to loop facilities (either their own or the ILEC’s), they are no less able than ILECs to deploy the new equipment that permits the provision of broadband services over those facilities, and they are, in fact, rapidly doing so.

CLECs already provide broadband services in each of the ten largest metropolitan statistical areas (MSAs) and half of the top fifty. They are in 21 states and 273 cities, and, according to a major CLEC trade association, “continue to deploy ... advanced technologies at a dramatic pace.”<sup>351</sup> Most of these markets are served, not by one, but by multiple CLECs.<sup>352</sup>

---

<sup>349</sup> *Id.* at paras. 53-58.

<sup>350</sup> *Id.* at para. 48.

<sup>351</sup> *UNE Fact Report* at VI-19, citing Petition of the Association for Local Telecommunications Services (ALTS) for a Declaratory Ruling Establishing Conditions Necessary to Promote Deployment of Advanced Telecommunications Capability Under Section 706 of the Telecommunications Act of 1996 at ii, CC Docket No. 98-78 (FCC filed May 27, 1998).

Collectively, CLECs offer advanced services to over five million homes, a number they predict will *quadruple* in 1999.<sup>353</sup>

CLECs have made these inroads *without* unbundled access to ILEC's advanced equipment. Their success in this regard is dispositive proof that they do not need such access to compete viably.

But there is more to this story. Not only are CLECs rapidly deploying the facilities needed to provide broadband service, they are doing so at a faster pace than the ILECs. Unhampered by regulatory impediments, such as LATA boundaries, which fundamentally change the economics of broadband deployment, CLECs, according to ALTS, lead the ILECs in providing advanced services over ILEC loops.<sup>354</sup>

This is not just bravado. While CLECs serve each of the top ten MSAs and half of the top fifty, ILECs serve only seven of the top ten and 22 of the top fifty.<sup>355</sup> Moreover, the Commission itself has found that CLECs have deployed more advanced services equipment than ILECs over ILEC loops.<sup>356</sup>

That CLECs have had no trouble providing advanced services should not be surprising. The Commission has already created the only UNE CLECs need to provide competitive advanced services - access to unbundled local loops - and the Commission's collocation orders

---

<sup>352</sup> *Id.*

<sup>353</sup> *Id.* at VI-20, citing Press Release, *ALTS Faults Monopolies' Repeated Efforts to Bypass Competitive Requirements for Advanced Services*, Dec. 7, 1998, <http://www.alts.org/tdbsshowarticle.asp?AID=117&type=News>.

<sup>354</sup> *Id.* citing Press Release, *ALTS' Fall Education Seminar Proves Success of Teleco Act in Stimulating Broadband Data and Competitive Providers*, Sept. 18, 1998.

<sup>355</sup> *Id.* at VI-19.

<sup>356</sup> *Id.* at VI-20, citing *Advanced Services Report* at paras. 53, 56, 58.

ensure that CLECs can attach their equipment to ILEC loops on the same physical premises as ILECs can. Moreover, that equipment is both cost efficient and easy to deploy. Analysts report that “IP-based networks are scaleable, flexible, more efficient, cheaper and easier to provide than traditional voice networks.”<sup>357</sup> Indeed, Intermedia, which has over 200 ATM switches, notes that “an ATM switch can handle approximately ten times as many calls as a voice switch and costs approximately one tenth as much as a voice switch, yielding a cost reduction of up to 99% of the switching components of local telephone calls, compared to the traditional switching method.”<sup>358</sup>

Consistent with these observations, CLECs already have deployed 57 packet switches in the Ameritech region.<sup>359</sup> These switches have been deployed, not only by AT&T and MCI WorldCom, but by smaller CLECs, as well, including Convergent Communications, Us MidtTel Corporation, TDS Metrocom, Buckeye Telesystem, and others. Indeed, one CLEC – Dakota Services, Inc. – has, since it was formed in 1997, deployed sixteen packet switches in the Ameritech region, *ten* in Wisconsin alone. Those switches are operational in such markets in Wisconsin as Appleton, Beloit, Eau Clair, Fond Du Lac, La Crosse, Racine, and Stevens Point, among others.<sup>360</sup> Clearly, then, packet switches can be quickly deployed by any reasonably efficient CLEC in any geographic location.

---

<sup>357</sup> *Id.* at VI-35.

<sup>358</sup> *Id.* at VI-35-36, citing Intermedia Communications, Inc., Form 10-K, filed March 25, 1998.

<sup>359</sup> *Markets Served by CLECs, 1999 CLEC Report*, New Paradigm Resources Group, 10<sup>th</sup> Ed., pp. 53-55, 65-66, 91-92, 114-115. This number is conservative because it does not include Class 5 switches that can perform both packet and circuit switching. For example, it does not include Nortel’s DMS SuperNode product line, which supports both circuit-switching on normal 64-kbps channels and packet switching. See Nortel Networks DMS SuperNode Family at <http://products.faulkner.com/products/facts000014322.htm>.

<sup>360</sup> *Id.*

Certainly ILECs have no advantage in the procurement and deployment of the equipment needed to provide ATC (though, as discussed above, a mere advantage, in and of itself, does not justify an unbundling obligation in any event). Multiple vendors provide the equipment needed for broadband services, including Cisco Systems, Alcatel, Copper Mountain, Lucent, and Westell. None of these vendors is affiliated in any way with an ILEC. In contrast, a number of CLECs have formed technical alliances with these vendors.<sup>361</sup> They have also formed strategic alliances with the likes of AT&T, MCI WorldCom, Microsoft, and others, which provide them capital, marketing channels, and, of course, a significant amount of business.<sup>362</sup>

It is perhaps for this reason that the Commission itself has tacitly admitted that the viability of competition for ATC does not hinge on whether CLECs are given access to ILEC facilities used to provide advanced services. In its August 1998, Section 706 Order, the Commission held that, if ILECs provide advanced services through a separate affiliate, the facilities used by the affiliate to provide such services would not be subject to any unbundling requirement.<sup>363</sup> The Commission would have never so held if it believed that CLECs could not compete viably without access to such facilities. It is unimaginable, for example, that if an ILEC transferred certain loops to an affiliate, the Commission would permit that affiliate to deny CLECs unbundled access to those loops.

The reasons the Commission required ILECs to provide advanced services through a separate affiliate in order to avoid the unbundling obligations of section 251(c)(3) were twofold. First, the Commission believed that, if such services were provided by the ILEC itself, the

---

<sup>361</sup> *UNE Fact Report* at VI-24-25.

<sup>362</sup> These alliances are detailed in *id* at VI-32.



related facilities would be subject to unbundling as a matter of law. That belief was grounded on the Commission's assumption that any network elements that were technically capable of being unbundled must be unbundled upon request. The Supreme Court has now put that mistaken assumption to rest. In order to require unbundling of a network element, the Commission must conclude, not only that access to that element is technically feasible, but that the requirements of section 251(d)(2) are satisfied. No such claim could be made with respect to new technology used to provide advanced services. Not only do ILECs have no "leg-up" in the deployment of such technology, they have *less* of it than do CLECs and they have no advantage on a going-forward basis with respect to future deployments.

Second, the Commission sought to give ILECs incentives to deploy advanced services through a separate affiliate so to minimize any risk of discrimination or cross-subsidization. Putting aside the question of whether a separate affiliate actually is a necessary or cost-effective means to address these risks clearly an unbundling obligation is not a permissible or appropriate means of addressing any such risks, to the extent they do exist. Thus, if the Commission is concerned that ILECs might discriminate or cross-subsidize to favor their own advanced services, it should explain those concerns and address them directly. If it believes it can justify a separate subsidiary requirement, it should attempt to do so. It should not, however, impose such a requirement through the back-door by bootstrapping unbundling requirements that do not exist into the Act in order to drive ILECs "voluntarily" to a separate affiliate.

In short, no credible claim can be made that facilities used to provide ATC should be subject to mandatory unbundling. That these facilities represent new technology, as to which

---

<sup>363</sup> *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Memorandum Opinion and Order and Notice of Proposed Rulemaking, CC Docket No. 98-147, FCC 98-188, released August 7, 1998.

ILECs have no legacy advantage, is itself dispositive of whether unbundling should be required. The fact that CLECs are deploying this technology at a rapid pace – indeed, more rapidly than the ILECs – makes this issue a virtual “no-brainer.”

Of course, section 251(d)(2) aside, there is a wholly independent reason for the Commission not to require unbundling of new technology used to provide advanced services. Section 706 requires the Commission to encourage the deployment on a reasonably and timely basis of advanced telecommunications capability to all Americans by, *inter alia*, removing barriers to infrastructure investment. Ameritech has described above how mandatory unbundling discourages investment in new infrastructure, not only by ILEC, but by CLECs as well. The Commission would be ignoring its statutory obligations under section 706 if, notwithstanding section 251(d)(2), it construed ILEC unbundling obligations so expansively as to extend those obligations to network elements used to provide ATC.

For all of the reasons stated above, the Commission should rule that the unbundling obligations of section 251(c)(3), as limited by section 251(d)(2), do not apply to new technology used to provide ATC, including DSLAMs, packet switches, and other new technology that may yet be developed for such purposes.

**g. AIN services.**

The Advanced Intelligent Network (AIN) is a network architecture that separates logic from switching equipment, allowing new services to be added without having to reprogram individual switches. It is described in the *Local Competition Order* as:

a network architecture that uses distributed intelligence in centralized databases to control call processing and manage network information, rather than performing those functions at every switch. An AIN-capable switch halts call progress when a resident software “trigger” is activated, and uses the SS7 network to access intelligent databases, known as Service Control Points

(SCPs), that contain service software and subscriber information, for instruction on how to route, monitor, or terminate the call. AIN is being used in the deployment of number portability, wireless roaming, and such advanced services as same number service (*i.e.* 500 number service) and voice recognition dialing. AIN services are designed and tested in an off-line computer known as a Service Creation Environment (SCE). Once a service is successfully tested, the software is transferred to an SMS that administers and supports SCP databases in the network. The SMS then regularly downloads software and information to an SCP where interaction with the voice network takes place via the signaling links and STPs discussed above.

Because AIN platforms facilitate the design, testing, and deployment of new software-based services, they are a means by which carriers can quickly, efficiently, and reliably bring to consumers the benefits of innovation. In this respect, they can play an important role in enhancing competition among carriers.

In the *Local Competition Order*, the Commission required ILECs to provide unbundled access, not only to the AIN platform itself, but to the services ILECs create over that platform.<sup>364</sup> Since that time, no CLEC has sought unbundled access either to Ameritech's AIN platform or its services. This, in itself, suggests that access to these elements is not, as the Commission assumed, "critical to entry in the local exchange market."<sup>365</sup>

Assuming *arguendo*, however, that the Commission continues to require unbundled access to the AIN platform – *i.e.* the SMS and SCE – there is no conceivable justification upon which the Commission could continue requiring unbundled access to the AIN services themselves. Indeed, the Commission failed to offer any such justification three years ago when it adopted that requirement. Thus, although the

---

<sup>364</sup> See *Local Competition Order*, 11 FCC Rcd at 15741-45, paras. 484-492.

<sup>365</sup> *Id.*

Commission concluded that “competitors would be at a significant disadvantage if they were forced to develop their own AIN *capability* immediately,”<sup>366</sup> and that “requiring entrants to bear the cost of deploying a fully redundant network architecture, including AIN databases and their application software, would constitute a significant barrier to market entry for competitive carriers,”<sup>367</sup> one searches in vain for any explanation as to why competitors cannot, at least, develop their own AIN services if they are given access to the ILEC’s AIN capability.

The Commission’s lack of an explanation as to why CLECs should receive access to AIN services developed by ILECs is particularly troubling, given that the *Local Competition Order* expressly recognized that this requirement could reduce ILEC incentives to develop innovative new AIN services:

We recognize that providing unbundled access to AIN call-related databases at cost, and in particular providing access to the incumbent LEC’s software applications that reside in the AIN databases, may reduce the incumbent’s incentive to develop new and advanced services using AIN.<sup>368</sup>

The Commission was right to be concerned about the effect of its requirement on ILEC incentives to innovate. It was wrong, though, to disregard those concerns. AIN services are classic examples of proprietary network elements. They are new software-based applications that represent, in the words of the Commission, “the cutting edge of

---

<sup>366</sup> *Id.* at 15745 (emphasis added).

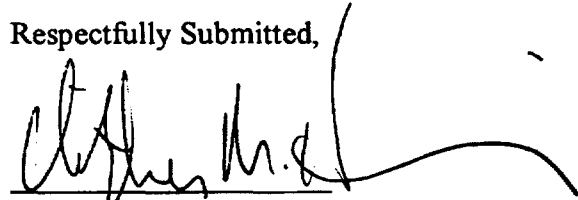
<sup>367</sup> *Id.*

<sup>368</sup> *Id.* The Commission went on to disregard these concerns, noting that “[I]n the near-term, however, requiring entrants to bear the cost of deploying a fully redundant network architecture, including AIN databases and their application software, would constitute a significant barrier to market entry for competitive carriers.” *Id.* The Commission stated, though, that “[a]s local service markets develop ... competition may reduce the incumbent LEC’s control over bottleneck facilities and increase the importance of innovation. In those circumstances it is important that incumbent LECs have the incentive to develop unique and innovative services supported by AIN.

telephone exchange services.”<sup>369</sup> As such, they should be made available as unbundled network elements only if access to them is necessary to the proper functioning of the facilities and equipment in which they are housed – *i.e.*, the SMS and the SCPs. Quite obviously, that is not the case. A CLEC does not need to *use* ILEC AIN services in order to design, test, and implement its own. It does not need access to ILEC AIN services in order to compete viably in the marketplace. At most – and even this is questionable – it needs access to the AIN platform itself.

Therefore, on remand, the Commission should modify its unbundling requirements relating to AIN capabilities. Absent any demonstrated need for access to the AIN platform, the Commission should eliminate its requirement that ILECs provide such access on an unbundled basis. At a minimum, it should eliminate its requirement that ILECs provide access to AIN services.

Respectfully Submitted,



John Lenahan  
Christopher Heimann  
Gary Phillips  
Michael Pabian  
Larry Peck  
Counsel for Ameritech  
1401 H Street, N.W. #1020  
Washington, D.C. 20005  
(202) 326-3817

May 26, 1999

---

Therefore at a later date, we will revisit the proper balance between providing unbundled access and maintaining the incentives of incumbent LECs to innovate.” *Id.*

<sup>369</sup> *Id.*